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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,156	10/06/2003	Guk-Chan Lim	P-0571	5743

34610 7590 10/11/2007

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EXAMINER	
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ART UNIT	PAPER NUMBER
2617	

MAIL DATE	DELIVERY MODE
10/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/678,156	LIM, GUK-CHAN	
	Examiner	Art Unit	
	Nghi H. Ly	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 July 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-31,33-37,40,41,43-46,50-59 and 64-66* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-31,33-37,40,41,43-46,50-59 and 64-66* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/31/07 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 3, 30, 40 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sylvain et al (US 2004/0062383A1) in view of Olds (US 6,757,263).

Regarding claims 1, 30, 40 and 55, Sylvain teaches a mobile communication system (see fig.1), comprising: a base station (see [0022], see "*switches 14 cooperate with base station*") and a first mobile terminal which transmits state information of the first mobile terminal to the base station, wherein the base station transmits the state information to a second mobile terminal (see [0070], see "*user A*", "*user B*" and "*state*

information". In addition, see fig.9B, "USER A" and "USER B" and "SWITCH 14" that cooperate with base station, for more details, see [0003], [0004], and [0022], see "*the base station, which facilitate wireless communications with mobile terminal**s***" and it reads on applicant's "*a second mobile terminal*") to inform the second mobile terminal that a call was released based on a low signal strength of the first mobile terminal (Abstract, see "has failed" and see [0022] and [0057]), wherein the second mobile terminal monitors the signal strength of first mobile terminal after the call release and performs an automatic call connection operation to re-establish the call (see Abstract, see "*Thus, when an attempt to establish a call between the first and second users has failed, the second user may monitor the presence information relating to the availability of the first user to decide when, and perhaps how, to contact the first user*), wherein **one of** the first mobile terminal or second mobile terminal is the call originating terminal and **the other** of the first mobile terminal or second mobile terminal is the call receiving terminal (see fig.1, where item 16A or item 16b can be a calling party and the other can be a called party).

Sylvain does not specifically disclose performing an automatic call connection operation to re-establish the call when the signal strength of the first mobile terminal exceeds a predetermined level.

Olds teaches performing an automatic call connection operation to re-establish the call when the signal strength of the first mobile terminal exceeds a predetermined level (see column 14, lines 2-5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Olds into the system of Sylvain in order to provide a communication networks in which repeating subscriber units are interconnected through wireless communication links (see Olds, column 1, lines 5-9).

Regarding claim 3, Sylvain further teaches the base station receives state information of the second mobile terminal and transmits the state information of the second mobile terminal to the first mobile terminal (see fig.1, Sylvain teaches the mobile terminal 16B, see fig.9B, "USER A" and "USER B" and "SWITCH 14" that cooperate with base station, for more details, see [0003], [0004], and [0022], see "*the base station, which facilitate wireless communications with mobile terminal**s***" and it reads on applicant's "*a second mobile terminal*").

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sylvain et al (US 2004/0062383A1) in view of Olds (US 6,757,263) and further in view of Toda (US 6,275,713) and Hayashi (US 6,650,913).

Regarding claim 4, the combination of Sylvain and Olds teaches the first mobile terminal comprises: a display which displays the state information of the second mobile terminal received from the base station (see Sylvain, [0070], see "*user A*", "*user B*" and "*state information*". In addition, see fig.9B, "USER A" and "USER B" and "SWITCH 14" that cooperate with base station, for more details, see [0003], [0004], and [0022], see "*the base station, which facilitate wireless communications with mobile terminal**s***" and it reads on applicant's "*a second mobile terminal*").

The combination of Sylvain and Olds does not specifically disclose a memory which stores a call list which includes a phone number of the second mobile terminal, a key panel including a call termination button, a timer which counts pre-set time after a call is released because of a network failure, and an MSM unit, a mobile station modem unit which controls transmission of the state information of the first mobile terminal to the base station, senses a received signal strength of the second mobile terminal when a call connection between the first and second mobile terminals is released because of a network failure, and performs an automatic call connection function in response to the second call connection release.

Toda teaches a memory which stores a call list which includes a phone number of the second mobile terminal (see Toda, column 2, lines 48-62, see "storing" and "storage"), a key panel including a call termination button (see Toda, column 1, lines 16-25 and column 8, lines 40-55), a timer which counts pre-set time after a call is released because of a network failure (see Toda, column 10, lines 30-36), and an MSM unit (see Toda, fig.1, processing section 14), a mobile station modem unit which controls transmission of the state information of the first mobile terminal to the base station (see Toda, fig.1, control section 11, and see Abstract, Toda teaches cellular phone, in order to communicate between cellular phones, the teaching of Toda inherently teaches a base station), senses a received signal strength of the second mobile terminal when a call connection between the first and second mobile terminals is released because of a network failure (see Toda, Abstract and column 1, lines 16-25 and column 8, lines 40-55, see "strength"), and performs an automatic call connection function in response to

the second call connection release (see Toda, Abstract and column 1, line 55 to column 4, lines 21, "automatically").

The combination of Sylvain, Olds and Toda does not specifically disclose a detecting sensor for judging whether a flip or a folder of the first mobile terminal is opened.

Hayashi teaches a detecting sensor for judging whether a flip or a folder of the first mobile terminal is opened (see Abstract and column 2, lines 33-37).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Hayashi into the system of Sylvain, Olds and Toda in order to reduce the amount of operations requiring user intervention (see Hayashi, column 1, lines 52-55).

5. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sylvain et al (US 2004/0062383A1) in view of Olds (US 6,757,263) and further in view of Chapman et al (US 4,775,995).

Regarding claims 5 and 6. The combination of Sylvain and Olds teaches a method of managing communications in a mobile communication system (Sylvain, see fig.1), comprising: storing state information transmitted from a first mobile terminal, the state information indicative of a signal strength of the first mobile terminal (Sylvain, Abstract, see "has failed") monitoring a call connection between the first mobile terminal and a second mobile terminal and transmitting the stored state information (Sylvain, see [0037]) transmitted from the first mobile terminal to the second mobile terminal when the

call connection between the first and second mobile terminals is terminated (Sylvain, see [0070], see "*user A*", "*user B*" and "*state information*". In addition, see fig.9B, "USER A" and "USER B" and "SWITCH 14" that cooperate with base station, for more details, see [0003], [0004], and [0022], see "*the base station, which facilitate wireless communications with mobile terminals*" and it reads on applicant's "*a second mobile terminal*").

The combination of Sylvain and Olds does not specifically disclose storing, state information in a base station.

Chapman teaches storing, state information in a base station (see column 9, lines 44-48 and column 10, lines 5-9, see "*signal strength value*" and it reads on applicant's "*state information*").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Chapman into the system of Sylvain and Olds in order to provide an improved method and arrangement for adaptively controlling the amount of adjacent channel interference (see Chapman, column 2, lines 46-49).

6. Claims 7-10, 12-14 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sylvain et al (US 2004/0062383A1) in view of Olds (US 6,757,263) and further in view of Chapman et al (US 4,775,995) and Toda (US 6,275,713).

Regarding claims 12 and 19, The combination of Sylvain and Olds teaches a method of managing calls in a mobile communication system (Sylvain, see fig.1),

comprising: connecting a call between an originating side terminal and a receiving side terminal (Sylvain, see fig.9B), periodically storing state information transmitted from at least one of the originating side and receiving side terminals (Sylvain, see [0037]), monitoring a call connection between the originating side and receiving side terminals (Sylvain, see [0070]), when the originating side and receiving side terminals are in a call connection state, storing status information for each of the terminals (Sylvain, see [0037]).

The combination of Sylvain and Olds does not specifically disclose storing state information transmitted from at least one of the originating side and receiving side terminals in a base station.

Chapman teaches storing state information transmitted from at least one of the originating side and receiving side terminals in a base station (see column 9, lines 44-48 and column 10, lines 5-9, see "*signal strength value*" and it reads on applicant's "*state information*").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Chapman into the system of Sylvain and Olds in order to provide an improved method and arrangement for adaptively controlling the amount of adjacent channel interference (see Chapman, column 2, lines 46-49).

The combination of Sylvain, Olds and Chapman does not specifically disclose when the call connection between the terminals is interrupted, checking whether the call has been interrupted because of a network failure, when the call has been interrupted

because of a network failure, automatically attempting a recall from the originating side terminal, when a call termination message is received from the originating side terminal or from the receiving side terminal, releasing the call connection between the terminals at the base station, and transmitting the state information of one of the originating side and receiving side terminals to the other of the originating side and receiving side terminals after the call connection release.

Toda teaches when the call connection between the terminals is interrupted, checking whether the call has been interrupted because of a network failure (see Abstract and column 1, line 55 to column 4, lines 21, see "disconnection"), when the call has been interrupted because of a network failure, automatically attempting a recall from the originating side terminal (see Abstract and column 1, line 55 to column 4, lines 21, see "disconnection", "reestablishment"), when a call termination message is received from the originating side terminal or from the receiving side terminal, releasing the call connection between the terminals at the base station (see Abstract, Toda teaches cellular phone, in order to communicate between cellular phones, the teaching of Toda inherently teaches a base station), and transmitting the state information of one of the originating side and receiving side terminals to the other of the originating side and receiving side terminals after the call connection release (see Abstract and column 1, line 55 to column 4, lines 21, see "disconnection", "reestablishment").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Toda into the system of Sylvain,

Olds and Chapman in order to provide a cellular phone capable of smoothly reinitiating a call (see Toda, column 1, lines 5-9).

Regarding claim 7, Sylvain further teaches receiving an originating signal from the second mobile terminal; transferring a terminating signal to the first mobile terminal (see [0070], see "*user A*", "*user B*" and "*state information*". In addition, see fig.9B, "USER A" and "USER B" and "SWITCH 14" that cooperate with base station, for more details, see [0003], [0004], and [0022], see "*the base station, which facilitate wireless communications with mobile terminals*" and it reads on applicant's "*a second mobile terminal*"), receiving the state information from the first mobile terminal in response to the terminating signal (see [0070], see "*user A*", "*user B*" and "*state information*". In addition, see fig.9B, "USER A" and "USER B" and "SWITCH 14" that cooperate with base station, for more details, see [0003], [0004], and [0022], see "*the base station, which facilitate wireless communications with mobile terminals*" and it reads on applicant's "*a second mobile terminal*").

Regarding claim 8, Sylvain further teaches periodically receiving state information from the first mobile terminal and updating previously stored state information and sensing whether a call interruption has occurred because of a network failure (see [0037]).

Regarding claim 9, Sylvain further teaches automatically transmitting a recall signal when the call interruption is sensed (see [0070], see "USER A is off").

Regarding claim 10, Sylvain further teaches receiving a call termination message (see [0070], see "USER A is off"), transferring the stored state information transmitted

from the first mobile terminal to the second mobile terminal in response to the call termination message (see [0037] and [0070]).

Regarding claim 13, the combination of Sylvain, Olds, Chapman and Toda further teaches transferring an originating signal from the originating side terminal to the base station (see Chapman, fig.1, wireless connection between devices), transferring a terminating signal from the base station to the receiving side terminal (see Chapman, fig.1, wireless connection between devices), and transferring a response message from the receiving side terminal to the base station in response to the terminating signal, thereby forming a traffic channel (see Chapman, fig.1, wireless connection between devices).

Regarding claim 14, the combination of Sylvain, Olds, Chapman and Toda further teaches the state information includes one of battery voltage information, an RSSI, and ON/OFF information of at least one of the terminals (see Sylvain [0070] or see Chapman, column 9, lines 44-48 and column 10, lines 5-9, see "*signal strength value*" and it reads on applicant's "*state information*").

Regarding claim 16, the combination of Sylvain, Olds, Chapman and Toda further teaches checking whether the call connection has been interrupted because of a network failure; starting a timer; judging whether a call termination message has been received; monitoring an RSSI (see Toda, Abstract and column 1, line 55 to column 4, lines 21, see "strength"), and transmitting a recall signal if the RSSI is greater than a predetermined reference value (see Toda, Abstract and column 1, line 55 to column 4, lines 21, see "disconnection", "reestablishment" and "abort").

Regarding claim 17, the combination of Sylvain, Olds, Chapman and Toda further teaches paging a phone number stored in a memory unit of the originating side terminal; and transmitting an originating call (see Toda, Abstract and column 1, line 55 to column 4, lines 21).

Regarding claim 18, the combination of Sylvain, Olds, Chapman and Toda further teaches if the timer elapses or a call termination message is received, terminating the recall attempting step of the originating side terminal (see Toda, column 10, lines 30-36).

Regarding claim 20, the combination of Sylvain, Olds, Chapman and Toda further teaches displaying the received state information on a display unit (see Toda, column 8, lines 1-6 and column 8, lines 56-62).

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sylvain et al (US 2004/0062383A1) in view of Olds (US 6,757,263) and Chapman et al (US 4,775,995) and further in view of Toda (US 6,275,713) and Hayashi (US 6,650,913).

Regarding claim 11, the combination of Sylvain, Olds, Chapman and Toda teaches the method of claim 10. The combination of Sylvain, Olds, Chapman and Toda does not specifically disclose the call termination message is generated by a call termination button of a key panel unit of the first mobile terminal or as a result of a folder or flip of the first mobile terminal being closed.

Hayashi teaches the call termination message is generated by a call termination button of a key panel unit of the first mobile terminal or as a result of a folder or flip of the first mobile terminal being closed (see Abstract and column 2, lines 33-37).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Hayashi into the system of Sylvain, Olds, Chapman and Toda in order to reduce the amount of operations requiring user intervention (see Hayashi, column 1, lines 52-55).

8. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sylvain et al (US 2004/0062383A1) in view of Olds (US 6,757,263) and Chapman et al (US 4,775,995) and further in view of Toda (US 6,275,713) and Hayashi (US 6,650,913).

Regarding claim 15, the combination of Sylvain, Olds and Chapman and Toda teaches the method of claim 12. The combination Sylvain, Olds and Chapman and Toda does not specifically disclose the call termination message is generated by a call termination button of a key panel unit of one of the terminals or as a result of detection of a folder or a flip of one of the terminals closing.

Hayashi teaches the call termination message is generated by a call termination button of a key panel unit of one of the terminals or as a result of detection of a folder or a flip of one of the terminals closing (see Abstract and column 2, lines 33-37).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Hayashi into the system of the

combination of Sylvain, Olds and Chapman and Toda in order to reduce the amount of operations requiring user intervention (see Hayashi, column 1, lines 52-55).

9. Claims 21, 23, 25, 31, 33-36, 41, 43-46 and 56-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sylvain et al (US 2004/0062383A1) in view of Toda (US 6,275,713).

Regarding claim 21, Sylvain teaches a method of managing calls in a mobile communication system (see fig.1), comprising: connecting a call between an originating side terminal and a receiving side terminal (see fig.9B), transmitting state information of the originating side terminal to a base station (see [0070], see "*user A*", "*user B*" and "*state information*". In addition, see fig.9B, "USER A" and "USER B" and "SWITCH 14" that cooperate with base station, for more details, see [0003], [0004], and [0022], see "*the base station, which facilitate wireless communications with mobile terminals*" and it reads on applicant's "*a receiving side terminal*").

Sylvain does not specifically disclose checking whether a call termination message is input from a user in response to a call interruption, sensing whether a received signal strength transmitted by one of the originating or receiving side terminals to the other of the originating or receiving side terminals is restored to a RSSI is restored to a level sufficient to make a call available, if the RSSI is restored, automatically attempting a recall based on a phone number stored in a memory, when the call to the receiving side terminal is terminated, receiving state information of the receiving side terminal, and displaying the state information indicative of the signal

strength of the receiving side terminal on the originating side terminal.

Toda teaches checking whether a call termination message is input from a user in response to a call interruption (see Abstract and column 1, line 55 to column 4, lines 21, see "disconnection"), sensing whether an RSSI is restored to a level sufficient to make a call available (see Abstract and column 1, line 55 to column 4, lines 21, see "storing", "strength"), when the RSSI transmitted by one of the originating or receiving side terminals to the other of the originating or receiving side terminals is restored, automatically attempting a recall based on a phone number stored in a memory, when the call to the receiving side terminal is terminated (see Abstract and column 1, line 55 to column 4, lines 21, see "disconnection", "automatically"), receiving state information of the receiving side terminal (see Abstract and column 1, line 55 to column 4, lines 21), and displaying the state information indicative of the signal strength of the receiving side terminal on the originating side terminal (see column 8, lines 1-6 and column 8, lines 56-62).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Toda into the system of Sylvain in order to provide a cellular phone capable of smoothly reinitiating a call (see Toda, column 1, lines 5-9).

Regarding claim 23, the combination of Sylvain and Toda further teaches starting a timer when the call interruption is detected and judging that the call interruption resulted from a network failure when the timer expires (see Toda, column 10, lines 30-36).

Regarding claim 25, the combination of Sylvain and Toda further teaches if the timer elapses or the call termination message is input (see Toda, column 10, lines 30-36), the originating side terminal terminates the recall attempting step and then terminates a call to the receiving side terminal (see Toda, Abstract and column 1, line 55 to column 4, lines 21, "reestablishment" and "reinitiates").

Regarding claim 31, the combination of Sylvain and Toda further teaches the first mobile terminal is a called terminal and the second mobile terminal is a calling terminal (see Sylvain, [0070], or see Toda, Abstract and column 1, line 55 to column 4, lines 21).

Regarding claim 33, Sylvain further teaches transmitting the operational state information to a base station (see Sylvain, [0070]), and transmitting the operational state information from the base station to the second mobile terminal (see Sylvain, [0070]).

Regarding claim 34, Sylvain further teaches detecting termination of a call between the first and second mobile terminals and transmitting the operational state information from the base station to the second mobile terminal in response to the detected call termination (see Sylvain, [0070]).

Regarding claim 35, the combination of Sylvain and Toda further teaches detecting a network failure during a call between the first and second mobile terminals and automatically transmitting a recall request from the second mobile terminal to the first mobile terminal in response to detection of the temporary network failure (see Toda, Abstract and column 1, line 55 to column 4, lines 21).

Regarding claim 36, the combination of Sylvain and Toda further teaches the recall request is automatically transmitted based on a last-stored phone number stored

in the second mobile terminal, said last-stored phone number corresponding to the first mobile terminal (see Toda, Abstract and column 1, line 55 to column 4, lines 21).

Regarding claim 41, the combination of Sylvain and Toda further teaches the first mobile terminal is a called terminal and the second mobile terminal is a calling terminal (see Sylvain, [0070] or see Toda, Abstract and column 1, line 55 to column 4, lines 21).

Regarding claim 43, Toda teaches receiving the operational state information in a base station and transmitting the operational state information from the base station to the second mobile terminal (see Abstract and column 1, line 55 to column 4, lines 21, Toda teaches cellular phone, in order to communicate between cellular phones, the teaching of Toda inherently teaches a base station).

Regarding claim 44, the combination of Sylvain and Toda further detecting termination of a call between the first and second mobile terminals and transmitting the operational state information from the base station to the second mobile terminal in response to the detected call termination (see Toda, Abstract and column 1, line 55 to column 4, lines 21, Toda teaches cellular phone, in order to communicate between cellular phones, the teaching of Toda inherently teaches a base station).

Regarding claim 45, the combination of Sylvain and Toda further teaches detecting a network failure during a call between the first and second mobile terminals; and automatically transmitting a recall request from the second mobile terminal to the first mobile terminal in response to detection of the temporary network failure (see Toda, Abstract and column 1, line 55 to column 4, lines 21, "automatically").

Regarding claim 46, the combination of Sylvain and Toda further teaches the

recall request is automatically transmitted based on a last-stored phone number stored in the second mobile terminal, said last-stored phone number corresponding to the first mobile terminal (see Toda, Abstract and column 1, line 55 to column 4, lines 21, "storing", "storage").

Regarding claim 56, the combination of Sylvain and Toda further teaches the operational state information of at least one of the terminal is indicative of a low battery voltage condition of the first mobile terminal (see Toda, column 4, lines 12-21).

Regarding claim 57, the combination of Sylvain and Toda further teaches the operational state information of at least one of the terminals is indicative of the terminal being turned off (see Toda, column 4, lines 12-21 and column 10, lines 45-50).

Regarding claim 58, the combination of Sylvain and Toda further teaches the operational state indicative of a low signal strength condition experienced by the terminals (see Toda, Abstract and column 1, line 55 to column 4, lines 21, "strength").

10. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sylvain et al (US 2004/0062383A1) in view of Toda (US 6,275,713) and further in view of Wooten et al (US 6,084,870).

Regarding claim 22, the combination of Sylvain and Toda teaches continuously transmitting the state information of the originating side terminal to the base station (see Sylvain, [0070]). The combination of Sylvain and Toda does not specifically disclose updating a memory of the base station.

Wooten teaches updating a memory of the base station (see column 17, lines 12-17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Wooten into the system of Sylvain and Toda in order to provide a novel and improved method and apparatus for utilizing communication systems (see Wooten, column 1, lines 11-16).

11. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sylvain et al (US 2004/0062383A1) in view of Toda (US 6,275,713) and further in view of Hayashi (US 6,650,913).

Regarding claim 24, the combination of Sylvain and Toda teaches the method of claim 21. The combination of Sylvain and Toda does not specifically disclose the call termination message is generated by a call termination button of a terminal key panel unit or as a result of detection of a terminal folder or flip closing.

Hayashi teaches the call termination message is generated by a call termination button of a terminal key panel unit or as a result of detection of a terminal folder or flip closing (see Abstract and column 2, lines 33-37).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Hayashi into the system of the combination of Sylvain and Toda in order to reduce the amount of operations requiring user intervention (see Hayashi, column 1, lines 52-55).

12. Claims 26, 28, 37, 50-53, 59 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sylvain et al (US 2004/0062383A1) in view of Oota et al (US 2003/0064708A1).

Regarding claims 26, 37, 50, 59 and 66 Sylvain teaches a method of managing calls in a mobile communication system (see Abstract), comprising: connecting a call between a receiving side terminal and an originating side terminal through a base station (see fig.1), receiving state information of the receiving side terminal in the base station, generating a call termination message, receiving state information of the originating side terminal in the base station, (see [0070], see "*user A*", "*user B*" and "*state information*". In addition, see fig.9B, "USER A" and "USER B" and "SWITCH 14" that cooperate with base station, for more details, see [0003], [0004], and [0022], see "*the base station, which facilitate wireless communications with mobile terminals*" and it reads on applicant's "*a receiving side terminal*"):

Sylvain does not specifically disclose displaying state information of the originating side terminal in the receiving side terminal, wherein the state information includes battery information of the originating side.

Oota teaches displaying state information of the originating side terminal in the receiving side terminal, wherein the state information includes battery information of the originating side (see [0031]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Oota into the system of Sylvain

in order to enable users to recognize that a multimedia file containing no image data is being normally reproduced (see Oota, [0008]).

Regarding claim 28, Sylvain teaches the call termination message is generated from the receiving side terminal or transmitted from the base station (see Sylvain, [0070]).

Regarding claim 51, Sylvain further teaches the first mobile terminal is a called terminal and the second mobile terminal is a calling terminal (see Sylvain, [0070] and see fig.9B).

Regarding claim 52, Sylvain further teaches the receiving and updating steps are performed in a base station (see fig.1, Sylvain teaches the mobile terminal 16B, see fig.9B, "USER A" and "USER B" and "SWITCH 14" that cooperate with base station, for more details, see [0003], [0004], and [0022], see "*the base station, which facilitate wireless communications with mobile terminal**s***" and it reads on applicant's "*a second mobile terminal*").

Regarding claim 53, Sylvain further teaches detecting termination of a call between the first and second mobile terminals and performing the transmitting step after said call termination (see Abstract).

13. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sylvain et al (US 2004/0062383A1) in view of Oota et al (US 2003/0064708A1) and further in view of Wooten et al (US 6,084,870).

Regarding claim 27, the combination of Sylvain and Oota teaches continuously transmitting the state information of the originating side terminal to the base station (see Sylvain, [0070]). The combination of Sylvain and Oota does not specifically disclose updating a memory of the base station.

Wooten teaches updating a memory of the base station (see column 17, lines 12-17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Wooten into the system of Sylvain and Oota in order to provide a novel and improved method and apparatus for utilizing communication systems (see Wooten, column 1, lines 11-16).

14. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sylvain et al (US 2004/0062383A1) in view of Oota et al (US 2003/0064708A1) and further in view of Hayashi (US 6,650,913).

Regarding claim 29, the combination of Sylvain and Oota teaches claim 26. The combination of Sylvain and Oota does not specifically disclose a detecting sensor for judging whether a flip or a folder of the first mobile terminal is opened.

Hayashi teaches a detecting sensor for judging whether a flip or a folder of the first mobile terminal is opened (see Abstract and column 2, lines 33-37).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Hayashi into the system of

Sylvain and Oota in order to reduce the amount of operations requiring user intervention (see Hayashi, column 1, lines 52-55).

15. Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sylvain et al (US 2004/0062383A1) in view of Oota et al (US 2003/0064708A1) and further in view of Chapman et al (US 4,775,995).

Regarding claim 54, the combination of Sylvain and Oota teaches a method of managing communications in a mobile communication system (Sylvain, see fig.1), comprising: storing state information transmitted from a first mobile terminal, the state information indicative of a signal strength of the first mobile terminal (Sylvain, Abstract, see "has failed") monitoring a call connection between the first mobile terminal and a second mobile terminal and transmitting the stored state information (Sylvain, see [0037]) transmitted from the first mobile terminal to the second mobile terminal when the call connection between the first and second mobile terminals is terminated (Sylvain, see [0070], see "*user A*", "*user B*" and "*state information*". In addition, see fig.9B, "USER A" and "USER B" and "SWITCH 14" that cooperate with base station, for more details; see [0003], [0004], and [0022], see "*the base station, which facilitate wireless communications with mobile terminal**s***" and it reads on applicant's "*a second mobile terminal*").

The combination of Sylvain and Oota does not specifically disclose storing, state information in a base station.

Chapman teaches storing, state information in a base station (see column 9, lines 44-48 and column 10, lines 5-9, see "*signal strength value*" and it reads on applicant's "*state information*").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Chapman into the system of Sylvain and Oota in order to provide an improved method and arrangement for adaptively controlling the amount of adjacent channel interference (see Chapman, column 2, lines 46-49).

16. Claims 64 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sylvain et al (US 2004/0062383A1) in view of Oota et al (US 2003/0064708A1) and further in view of Toda (US 6,275,713).

Regarding claim 64, the combination of Sylvain and Oota teaches 59. The combination of Sylvain and Oota does not specifically disclose a detector which detects an interruption of a call with the other terminal and a processor which automatically transmits a recall signal based on the detected call interruption.

Toda further teaches a detector which detects an interruption of a call with the other terminal and a processor which automatically transmits a recall signal based on the detected call interruption (see Toda, column 6, lines 11-19 and see Abstract and column 1, line 55 to column 4, lines 21, "automatically").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Toda into the system of Sylvain

and Oota in order to provide a cellular phone capable of smoothly reinitiating a call (see Toda, column 1, lines 5-9).

Regarding claim 65, the combination of Sylvain, Oota and Toda further teaches the call interruption is a network failure (see Toda, Abstract and column 1, line 55 to column 4, lines 21, see "disconnection").

Response to Arguments

17. Applicant's arguments filed 07/31/07 have been fully considered but they are not persuasive.

On page 19 of applicant's remarks, applicant argues that Sylvain does not disclose that the state information is indicative of a low signal strength of first mobile terminal.

In response, Sylvain does in deed teach the state information is indicative of a low signal strength of first mobile terminal (see Abstract, see "has failed" and see [0022] and [0057]).

On page 20 of applicant's remarks, applicant argues the Sylvain publication does not disclose that the state information of a first mobile terminal transmitted to a second mobile terminal is indicative of a low signal strength (e.g., low RSSI) of first mobile terminal in a mobile network as in claim 1.

In response, Sylvain does in deed teach the state information of a first mobile terminal transmitted to a second mobile terminal is indicative of a low signal strength

(e.g., low RSSI) of first mobile terminal in a mobile network (see Abstract, see "has failed" and see [0022] and [0057]).

On page 21 of applicant's remarks, applicant argues Olds does not teach or suggest that this indicator provides an indication of a low signal strength of the "first terminal" (e.g., the originating terminal) as required by claim 1, and the Olds patent does not teach or suggest that the originating terminal even transmits information indicative of its signal strength of any kind or at any time, let alone at a time after a call was released as a result of the low signal strength, and the Olds patent also fails to teach or suggest that "the second mobile terminal monitors the signal strength of first mobile terminal after the call release and performs an automatic call connection operation to re-establish the call when the signal strength of the first mobile terminal exceeds a predetermined level".

In response, Olds does in deed teach that the indicator provides an indication of a low signal strength of the "first terminal" (e.g., the originating terminal) as required by claim 1 (see column 14, lines 2-5), and the originating terminal even transmits information indicative of its signal strength of any kind or at any time (see column 14, lines 2-5), let alone at a time after a call was released as a result of the low signal strength (see column 14, lines 2-5), and that "the second mobile terminal monitors the signal strength of first mobile terminal after the call release and performs an automatic call connection operation to re-establish the call when the signal strength of the first mobile terminal exceeds a predetermined level" (also see column 14, lines 2-5).

On page 22 of applicant's remarks, applicant argues Olds also fails to teach or suggest performing an automatic call connection operation to re-establish a released call when the signal strength of the first mobile terminal exceeds a predetermined level, e.g., returns to a certain signal strength for sustaining the call. In addition to these features, claim 1 further recites that "one of the first mobile terminal or second mobile terminal is the call originating terminal and the other of the first mobile terminal or second mobile terminal is the call receiving terminal." The Olds patent does not teach or suggest these features, i.e., Olds does not teach or suggest: (1) transmitting signal quality information from the originating terminal to the receiving terminal, (2) that one of the originating or receiving mobile terminals monitor the other's signal strength after a call release occurs, and (3) that an automatic call connection operation is performed to re-establish the call when the signal strength of the first mobile terminal exceeds a predetermined level, and therefore clear that the Sylvain publication and Olds patent do not teach or suggest all the features of claim 1.

In response, Olds does indeed teach performing an automatic call connection operation to re-establish a released call when the signal strength of the first mobile terminal exceeds a predetermined level, e.g., returns to a certain signal strength for sustaining the call (see column 14, lines 2-5). In addition to these features, claim 1 further recites that "one of the first mobile terminal or second mobile terminal is the call originating terminal and the other of the first mobile terminal or second mobile terminal is the call receiving terminal." (see column 14, lines 2-5) , Olds does indeed teach or suggest: (1) transmitting signal quality information from the originating terminal to the

receiving terminal (see column 14, lines 2-5), (2) that one of the originating or receiving mobile terminals monitor the other's signal strength after a call release occurs (see column 14, lines 2-5), and (3) that an automatic call connection operation is performed to re-establish the call when the signal strength of the first mobile terminal exceeds a predetermined level (also see column 14, lines 2-5), and the combination of Sylvain publication and Olds patent does indeed teach all the features of claim 1. In addition, applicant's attention is directed to the teaching of Sylvain and Olds in claim 1 above.

On page 23 of applicant's remarks, applicant argues that claim 30 recites "transmitting information indicative of the operational state to a second mobile terminal, the second mobile terminal outputting a relative signal strength indicator (RSSI) of the first mobile terminal based on the transmitted operational state information." These features are not taught or suggested by the Sylvain publication and Olds patent, whether taken alone or in combination.

In response, Sylvain does in deed teach "transmitting information indicative of the operational state to a second mobile terminal, the second mobile terminal outputting a relative signal strength indicator (RSSI) of the first mobile terminal based on the transmitted operational state information" (see Abstract, see “has failed” and see [0022] and [0057]).

On page 23 of applicant's remarks, applicant argues that claim 40 recites "displaying the operational state information on a second mobile terminal, wherein the operational state information includes at least one of signal strength information or

battery information of the first mobile terminal." These features are not taught or suggested by the Sylvain publication and Olds patent, i.e., neither reference teaches or suggests displaying the specific type of information recited in claim 40.

In response, Sylvain does in deed teach "displaying the operational state information on a second mobile terminal, wherein the operational state information includes at least one of signal strength information or battery information of the first mobile terminal" (see Abstract, see "has failed" and see [0022] and [0057]).

On page 23 of applicant's remarks, applicant argues that claim 55 recites: (1) a transmitter which transmits information indicative of the operational state of the terminal to a base station, (2) a receiver which receives information indicative of an operational state of another terminal, and (3) a controller which performs an automatic call connection operation to re-establish a call with the mobile terminal when the operational state information of the other terminal is determined to lie within a predetermined range. These features are not taught or suggested by the Sylvain publication and Olds patent, whether taken alone or in combination.

In response, Olds does indeed teach a transmitter which transmits information indicative of the operational state of the terminal to a base station (see column 14, lines 2-5) a receiver which receives information indicative of an operational state of another terminal, and a controller which performs an automatic call connection operation to re-establish a call with the mobile terminal when the operational state information of the

other terminal is determined to lie within a predetermined range (see column 14, lines 2-5) and the combination of Sylvain an Olds indeed teaches claim 55.

On page 24 of applicant's remarks, applicant argues that claim 4 recites that the first mobile terminal includes "a mobile station modem unit which.., senses a received signal strength of the second mobile terminal when a call connection between the first and second mobile terminals is released because of a network failure, and performs an automatic call connection function in response to the second call connection release." As previously discussed, the Sylvain publication does not teach or suggest these features, and neither do the Toda and Hayashi references.

In response, Toda teaches the first mobile terminal includes "a mobile station modem unit which.., senses a received signal strength of the second mobile terminal when a call connection between the first and second mobile terminals is released because of a network failure (see Toda, Abstract and column 1, lines 16-25 and column 8, lines 40-55, see "strength"), and performs an automatic call connection function in response to the second call connection release (see Toda, Abstract and column 1, lines 16-25 and column 8, lines 40-55, see "strength"), and the combination of Sylvain, Olds, Toda and Hayashi does indeed teaches 4. In addition, applicant's attention is directed to the teaching of Sylvain, Olds, Toda and Hayashi in claim 4 above.

On page 25 of applicant's remarks, applicant argues that Chapman does not teach or suggest the features (discussed above) missing from Sylvain and Old.

In response, Chapman does indeed teach missing from Sylvain and Old. In addition applicant's attention is directed to the teaching of Chapman in claim 5 above.

On page 25 of applicant's remarks, applicant argues that claim 6 recites storing, in a base station, state information transmitted from a first mobile terminal, where "the state information is indicative of a signal strength of the first mobile terminal." Claim 6 then recites transmitting this signal strength information from the first mobile terminal to a second mobile terminal. The Sylvain publication does not teach or suggest transmitting signal strength information of one mobile terminal to another mobile terminal.

Sylvain does indeed teach "the state information is indicative of a signal strength of the first mobile terminal" (see Abstract, see "has failed" and see [0022] and [0057]).

On pages 26 and 27 of applicant's remarks, applicant argues that the Olds and Chapman patents do not teach or suggest all the features missing from the Sylvain publication, including the additional feature added by amendment to claim 6 that "one of the first mobile terminal or second mobile terminal is the call originating terminal and the other of the first mobile terminal or second mobile terminal is the call receiving terminal."

In response, Sylvain does indeed teach wherein **one of** the first mobile terminal or second mobile terminal is the call originating terminal and **the other** of the first mobile terminal or second mobile terminal is the call receiving terminal (see Sylvain, fig.1, where item 16A or item 16b can be a calling party and the other can be a called party).

Claims 7-10, 12-14, and 16-20 were rejected under 35 USC § 103(a) for being obvious in view of a Sylvain, Olds, Toda and Chapman combination. Claims 7-10 depend from claim 6. The references forming this present combination do not teach or suggest, either individually or collectively, all of the features recited in claim 6.

In response, the combination of Sylvain, Olds and Chapman does indeed teach claim 6. In addition, applicant's attention is directed to the teaching of Sylvain, Olds and Chapman in claim 6 above.

On pages 26 and 27 of applicant's remarks, applicant argues that claim 12 recites "when the call connection between the terminals is interrupted, checking whether the call has been interrupted because of a network failure" and "when the call has been interrupted because of a network failure, automatically attempting a recall from the originating side terminal." the Sylvain publication does not teach or suggest that when the call connection between the terminals is interrupted, checking whether the call has been interrupted because of a network failure" and "when the call has been interrupted because of a network failure, automatically attempting a recall from the originating side terminal." The Olds patent also fails to teach or suggest these features.

In response, Toda does indeed teach when the call connection between the terminals is interrupted, checking whether the call has been interrupted because of a network failure (see Abstract and column 1, line 55 to column 4, lines 21, see "disconnection"), when the call has been interrupted because of a network failure, automatically attempting a recall from the originating side terminal (see Abstract and column 1, line 55 to column 4, lines 21, see "disconnection", "reestablishment"), when a

call termination message is received from the originating side terminal or from the receiving side terminal, releasing the call connection between the terminals at the base station (see Abstract, Toda teaches cellular phone, in order to communicate between cellular phones, the teaching of Toda inherently teaches a base station), and transmitting the state information of one of the originating side and receiving side terminals to the other of the originating side and receiving side terminals after the call connection release (see Abstract and column 1, line 55 to column 4, lines 21, see "disconnection", "reestablishment"), and the combination of Sylvain, Olds, Chapman and Toda does indeed teach claim 12. In addition, applicant's attention is directed to the teaching of Sylvain, Olds, Chapman and Toda in claim 12 above.

On page 27 of applicant's remarks, applicant argues that Chapman also does not teach transmit state information of one terminal to another terminal.

In response, that Chapman does indeed teach transmit state information of one terminal to another terminal (see Chapman, fig.1).

On page 27 of applicant's remarks, applicant argues that claim 15 was rejected for being obvious in view of a Sylvain-Olds-Toda-Hayashi combination. Applicants submit that claim 15 is allowable on grounds that the features of base claim 12 are not taught or suggested by the cited combination of references.

In response, claim 12 are taught by Sylvain, Olds, Chapman and Toda. In addition, applicant's attention is directed to the teaching of Sylvain, Olds, Chapman and Toda in claim 12 above, and Claim 15 are taught by Sylvain, Olds, Chapman, Toda and

Hayashi. In addition, applicant's attention is directed to the teaching of Sylvain, Olds, Chapman, Toda and Hayash in claim 15 above.

On page 28 of applicant's remarks, applicant argues claim 21 recites "sensing whether a received signal strength transmitted by one of the originating or receiving side terminals to the other of the originating or receiving side terminals is restored to a level sufficient to make a call available," "when the received signal strength is restored, automatically attempting a recall based on a phone number stored in a memory," and "displaying the state information indicative of the signal strength of the receiving side terminal on the originating side terminal." These features are not taught or suggested by the Sylvain and Toda references, whether taken alone or in combination.

In response, Toda teaches checking whether a call termination message is input from a user in response to a call interruption (see Abstract and column 1, line 55 to column 4, lines 21, see "disconnection"), sensing whether an RSSI is restored to a level sufficient to make a call available (see Abstract and column 1, line 55 to column 4, lines 21, see "storing", "strength"), when the RSSI transmitted by one of the originating or receiving side terminals to the other of the originating or receiving side terminals is restored, automatically attempting a recall based on a phone number stored in a memory, when the call to the receiving side terminal is terminated (see Abstract and column 1, line 55 to column 4, lines 21, see "disconnection", "automatically"), receiving state information of the receiving side terminal (see Abstract and column 1, line 55 to column 4, lines 21), and displaying the state information indicative of the signal strength of the receiving side terminal on the originating side terminal (see column 8, lines 1-6

and column 8, lines 56-62), and the combination of Sylvain and Toda does indeed teach claim 21.

Claims 22 and 24 was rejected for being obvious in view of a Sylvain-Toda-Hayashi or a Sylvain-Toda-Wooten combination. This rejection is traversed on grounds that the features of base claim 21 are not taught or suggested by the cited references, whether taken alone or in combination.

In response, the combination of Sylvain, Toda and Wooten does indeed teach claim 22, and the combination of Sylvain, Toda and Hayashi does indeed teach 24. In addition, applicant's attention is directed to the teaching of the references in claims 22 and 24 above.

On page 29 of applicant's remarks, applicant argues that claim 26 recites "displaying state information of the originating side terminal in the receiving side terminal, wherein the state information includes battery information of the originating side terminal." These features are not taught or suggested by the Sylvain and Oota references, whether taken alone or in combination.

In response, Oota does indeed teach displaying state information of the originating side terminal in the receiving side terminal, wherein the state information includes battery information of the originating side terminal (see Oota, [0031]), and the combination of Sylvain and Oota does indeed teach claim 26. In addition, applicant's attention is directed to the teaching of the Sylvain and Oota in claim 26 above.

On page 29 of applicant's remarks, applicant argues that claim 37 recites transmitting information indicative of the operational state to a second mobile terminal, where "the operational state information is indicative of a low battery voltage condition of the called terminal." These features are not taught or suggested by the Sylvain and Oota references, whether taken alone or in combination.

In response, Oota does indeed teach the operational state information is indicative of a low battery voltage condition of the called terminal (see Oota, [0031]), and the combination of Sylvain and Oota does indeed teach claim 37. In addition, applicant's attention is directed to the teaching of the Sylvain and Oota in claim 37 above.

On page 30 of applicant's remarks, applicant argues that claim 50 recites that "the operational state information includes battery information of the first mobile terminal." The Sylvain and Oota references do not individually or collectively teach or suggest transmitting battery information of one mobile terminal to another mobile terminal. Accordingly, it is submitted that claim 50 and its dependent claims are allowable over the references of record, whether taken alone or in combination.

In response, Oota does indeed teach the operational state information includes battery information of the first mobile terminal (see Oota, [0031]), and the combination of Sylvain and Oota does indeed teach claim 50. In addition, applicant's attention is directed to the teaching of the Sylvain and Oota in claim 50 above.

On page 30 of applicant's remarks, applicant argues that claim 59 recites a mobile communication terminal which includes "a display that displays the operational

state information on a second mobile terminal, wherein the operational state information is indicative of a low battery voltage condition of the other terminal or a low signal strength condition experienced by the other terminal." As previously indicated, the Sylvain and Oota publications do not individually or collectively teach or suggest these features.

In response, Oota does indeed teach a display that displays the operational state information on a second mobile terminal, wherein the operational state information is indicative of a low battery voltage condition of the other terminal or a low signal strength condition experienced by the other terminal (see Oota, [0031]), and the combination of Sylvain and Oota does indeed teach claim 59. In addition, applicant's attention is directed to the teaching of the Sylvain and Oota in claim 59 above.

On page 30 of applicant's remarks, applicant argues that claim 27 was rejected for being obvious in view of a Sylvain-Oota-Wooten combination. This rejection is traversed on grounds that the cited references do not teach or suggest all of the features of base claim 26, whether those references are taken alone or in combination.

In response, the combination of Sylvain and Oota does indeed teach claim 26, and the combination of Sylvain, Oota and Wooten does indeed teach claim 27.
In addition, applicant's attention is directed to the teaching of the references in claims 26 and 27 above.

On page 30 of applicant's remarks, applicant argues that claim 29 was rejected for being obvious in view of a Sylvain-Oota-Hayashi combination. This rejection is

traversed on grounds that the cited references do not teach or suggest all of the features of base claim 26, whether those references are taken alone or in combination.

In response, the combination of Sylvain and Oota does indeed teach claim 26, and the combination of Sylvain, Oota and Hayashi does indeed teach claim 29. In addition, applicant's attention is directed to the teaching of the references in claims 26 and 29 above.

On page 31 of applicant's remarks, applicant argues that Claim 54 was rejected for being obvious in view of a Sylvain-Oota-Chapman combination. This rejection is traversed on grounds that the cited references do not teach or suggest all of the features of base claim 50, whether those references are taken alone or in combination.

In response, the combination of Sylvain and Oota does indeed teach claim 50, and the combination of Sylvain, Oota and Chapman does indeed teach claim 54. In addition, applicant's attention is directed to the teaching of the references in claims 50 and 54 above.

On page 31 of applicant's remarks, applicant argues that claims 64 and 65 were rejected for being obvious in view of a Sylvain-Oota combination. This rejection is traversed on grounds that the cited references do not teach or suggest all of the features of base claim 59, whether those references are taken alone or in combination.

In response, the combination of Sylvain and Oota does indeed teach claim 59, and the combination of Sylvain, Oota and Toda does indeed teach claims 64 and 65. In

addition, applicant's attention is directed to the teaching of the references in claims 59, 64 and 65 above.

Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (571) 272-7911. The examiner can normally be reached on 9:30am-8:00pm Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nghi H. Ly